6193 8/24/93 I.1

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ecology and environment, inc.

SITE SAFETY PLAN

Version 988

A. GENERAL INFORMATION

Project Title: Hoffman Landfill/Asphalt Assoc. Project No.: ZT2051

TDD/Pan No.: T059308023/E.J10809SAA.

Project Manager: Raghu Nagam Project Dir.:

Location(s): Rock Falls, Illinois (Whiteside County)

Prepared by: Hette Anderson Date Prepared: 8-24-93

Approval by: Ronald W. Burg Date Approved: 8/24/93

Site Safety Officer Review: R. Nagam Date Reviewed: 8/24/93

Scope/Objective of Work: Site reconaissance, air monitoring, Collecting samples from drums, Soil sampling

Proposed Date of Field Activities: 8-25-93

Background Info: Complete: [ ] Preliminary (No analytical data available) [X]

Documentation/Summary:

Overall Chemical Hazard:	Serious [ ]	Moderate [ ]
	Low [ ]	Unknown [X]
Overall Physical Hazard	Serious [ ]	Moderate [ ]
	Low [ ]	Unknown [X]

B. SITE/WASTE CHARACTERISTICS

Waste Type(s):

Liquid [X]	Solid [X]	Sludge [ ]	Gas/Vapor [X]

Characteristic(s):

Flammable/ Ignitable [X]	Volatile [X]	Corrosive [ ]	Acutely Toxic [X]
Explosive [ ]	Reactive [X]	Carcinogen [X]	Radioactive* [ ]

Other:

Physical Hazards:

Overhead [ ]	Confined* Space [ ]	Below Grade [ ]	Trip/Fall [X]
Puncture [X]	Burn [ ]	Cut [X]	Splash [X]
Noise [ ]	(Heat)/Cold Stress [X]	Other:	

*Requires completion of additional form and special approval from the Corporate Health/Safety group. Contact RSC or HQ.

HS018A(04/02/91)

Site History/Description and Unusual Features (see Sampling Plan for detailed description): HISTORY UNKNOWN
KNOWN AS A DUMPING PLACE.

Locations of Chemicals/Wastes: UNKNOWN

Estimated Volume of Chemicals/Wastes: UNKNOWN.

Site Currently in Operation Yes: [ ] No: [X]

C. HAZARD EVALUATION

List Physical Hazards by Task (i.e., drum sampling - explosion hazard, drilling - noise hazard, etc.) and number them. (Task numbers are cross-referenced in Section D)

Task/Physical Hazard Evaluation:
1. Site walkthrough - trip/fall, cut, puncture, heat stress
2. drum sampling - splash, TANK SAMPLING, SPLASH.
3. Soil sampling - trip/fall, cut, heat stress
4.
5.
6.
7.
8.

Chemical Hazard Evaluation:

Compound	PEL/TWA	Route of Exposure	Acute Symptoms	Odor Threshold	Odor Description
Toluene	PEL 100 ppm TWA 100 ppm	IN, SK, IH	RT, E, W	1.20 ppm	pungent/sour
Ethyl benzene	PEL TWA 100 ppm 100 ppm	IN, E, SK, IH	IR1, W, SK, DR	—	aromatic/oily
Xylene	PEL TWA 100 ppm 100 ppm	IN, SK, IH, E	H, C, N, AB	20 ppm	sweet
[redacted]				?	
1,1,1-trichloroethane	PEL TWA 350 ppm 350 ppm	IN, E, SK	E, SK	390.00 ppm	sweetish
bis 2-ethylhexyl phthalate					

Note: Complete and attach a Hazard Evaluation Sheet for major known contaminants. Codes for C.H.E. below:

AB = ABDOMINAL PAIN	DA = DERMAL ABSORPTION	IH = INHALATION	A = OCULAR
AC = ACHES	DI = DIARRHEA	IN = INGESTION	SK = SKIN CONTACT
AN = ANEMIA	DS = DISTRESSED STOMACH	IR1= IRR OF E/M/THROAT	U = ULCERATION
BV = BLURRED VISION	DP = CNS DEPRESSION	IR = IRRITATION	V =. VOMITING
C = COUGHING	DR = DROWSINESS	E = EYES	M = MOUTH
W = WEAKNESS	CD = CONTACT DERMATITIS	DZ = DIZZINESS	CP = CHEST PAIN
H = HEADACHES	LC = LOSS OF CONSCIOUSNESS	RT = RESPIRATORY TRACT	N = NAUSEA
SB = SHORTNESS OF BREATH	OTHER:		

D. SITE SAFETY WORK PLAN

Site Control: Attach map, use back of this page, or sketch of site showing hot zone, contamination reduction, zone, etc.

	Y	N		Y	N
Perimeter identified?	[ ]	[X]	Site secured?	[ ]	[X]
Work Areas Designated?	[ ]	[X]	Zone(s) of Contamination Identified?	[ ]	[X]

Personnel Protection (TLD badges required for all field personnel):

Anticipated Level of Protection (Cross-reference task numbers to Section C):

	A	B	C	D
Task 1			X	
Task 2		X		
Task 3			X	
Task 4				

(Expand if necessary)

Modifications: Upgrade will be conduct if under dry & dusty conditions.

Action Levels for Evacuation of Work Zone Pending Reassessment of Conditions:

- Level D: O_2 <19.5% or >25%, explosive atmosphere >10% LEL, organic vapors above background levels, particulates >_____ mg/m^3, other N/A.
- Level C: O_2 <19.5% or >25%, explosive atmosphere >25% LEL_3 (California-20%), unknown organic vapor (in breathing zone) >5 ppm, particulates >_____ mg/m^3, other N/A.
- Level B: O_2 <19.5% or >25%, explosive atmosphere >25% LEL (California-20%), unknown organic vapors (in breathing zone) >500 ppm, particulates >_____ mg/m^3, other N/A.
- Level A: O_2 <19.5% or >25%, explosive atmosphere >25% LEL (California-20%), unknown organic vapors >500 ppm, particulates >_____ mg/m^3, other N/A.

Air Monitoring (daily calibration unless otherwise noted):

Contaminant of Interest	Type of Sample (area, personal)	Monitoring Equipment	Frequency of Sampling
ORGANICS	area	HNu -	THROUGHOUT.
RADIATION	area	RAD MINI	THROUGHOUT.
CYANIDE	DRUM, TANKS	MONITOX.	DRUMS, TANKS.
O2/EXPLOSIMETER	DRUMS, TANKS.	O2/EXPLOSIMETER	WHILE DRUM & TANK SAMPLING

(Expand if necessary)

Decontamination Solutions and Procedures for Equipment, Sampling Gear, etc.:

DECONTAMINATION SOLUTION - ALCONOX SOLUTION. ALL CONTAMINATED EQUIPMENT WILL BE TRIPLE RINSED WITH ALCONOX SOL'N. & WATER.

Personnel Decon Protocol: alconox and deionized water as needed

Decon Solution Monitoring Procedures, if Applicable: N/A

Special Site Equipment, Facilities, or Procedures (Sanitary Facilities and Lighting Must Meet 29 CFR 1910.120): N/A

Site Entry Procedures and Special Considerations: Permission will be obtained prior to site entry. Stay upwind of contamination when possible. The buddy system will be maintained at all times.

Work Limitations (time of day, weather conditions, etc.) and Heat/Cold Stress Requirements:
Work is restricted to daylight hours only and workers are to be monitored for heat/cold stress. When vermiculite is used to pack samples, dust masks will be worn.

General Spill Control, if applicable: N/A

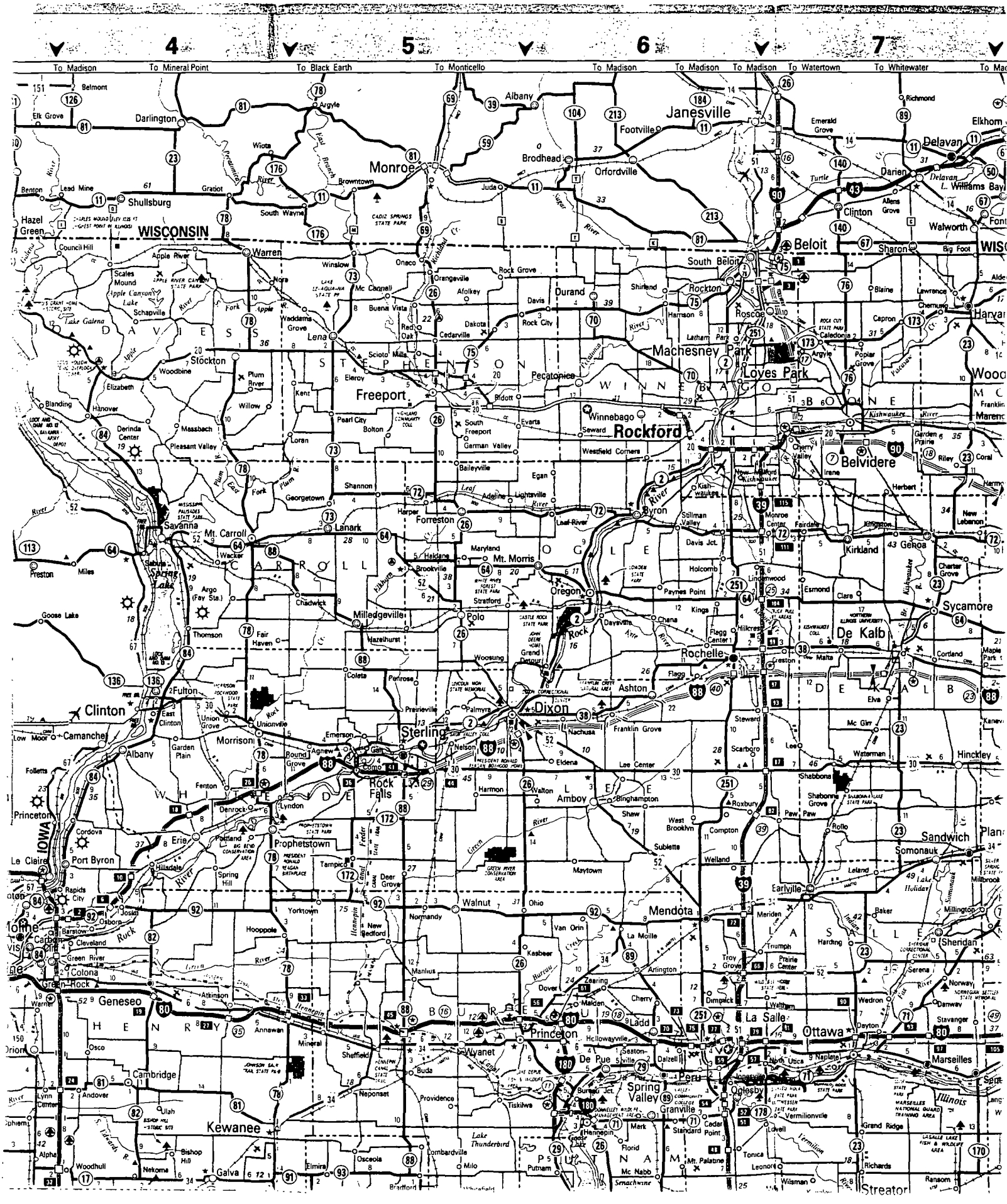
Investigation-Derived Material Disposal (i.e., expendables, decon waste, cuttings):
Investigative-derived materials will be decontaminated in accordance with procedures listed above. The decontaminated material will be bagged and left on-site in appropriate waste containers with prior permission of site owner/operator

Sample Handling Procedures Including Protective Wear:
After samples have been collected, the outside of the sample bottles will be decontaminated by washing (not submerging) the bottles in an Alconox solution and rinsing in distilled water. The protective clothing level (i.e. suits, gloves, boots) worn during on-site job activities will be maintained while decontaminating the bottles. Respiratory protection will be worn based on professional judgement. Latex gloves, at a minimum, will be worn while handling the bottles after decontamination.

Team Member*	Responsibility
Raghu Nagam	Team Leader
John Sherrard	Site Safety Officer
Yvette Anderson	TEAM MEMBER

*All entries into exclusion zone require Buddy System use. All E & E field staff participate in medical monitoring program and have completed applicable training per 29 CFR 1910.120. Respiratory protection program meets requirements of 29 CFR 1910.134, and ANSI Z88.2 (1980).

Site Location Map



Site Name HOFFMAN LF/ASPHALT ASN.
Job No. 2T205 1
TDD/PAN 705-9308-023

SITE HISTORY (Continued)

SITE HISTORY UNKNOWN AT THIS TIME. DRUMS & TANKS AT THIS LOCATION ARE A RESULT OF DUMPING. DRUM & TANK CONTENTS UNKNOWN. PREVIOUS SOIL SAMPLING BY IEPA AROUND THIS SITE REVEALED 1,1,1-TRICHLOROETHANE, AND XYLENE CONTAMINATION.

Ecology and Environment, Inc.
Hazard Evaluation of Chemicals
Region V - Chicago

[redacted] : / /
[redacted] : _____
No. :
Class: 1175-FL LIQ CLS

CHEMICAL NAME: Ethyl Benzene
Synonym: Phenylethane, Ethylbenzol
Formula: C6H5CH2CH3
UN/NA #:

CHEMICAL PROPERTIES

St: Liquid | Boil Pt: 277.20 °F | Ionz Pot : 8.76 ev | Fl Pt: 59.00°F
Wt : 106.17 | Melt Pt: -139.00 °F | Vap Press: 7.10000 mmHg | LFL : 1.00%
r : 0.86 | Frz Pt : -139.00 °F | Odr Thr : -- | UFL : 6.70%
le : F | Hazardous Polymerization will occur : F
: aromatic, oily
mpat/React: nitric acid, oxidizing agents
bility : water-slightly; sol in alcohols, benzene, carbon tetrachloride, ether

TOXICOLOGICAL PROPERTIES

sure Limits: TLV-TWA (ACGIH): 100.00000ppm | PEL (OSHA): 100.00000ppm | IDLH: 2000.00000ppm
STEL: 125.00000ppm | STEL: —

r erties :
Dat.. Inhalation: human TcLo: 100ppm/8hr
Dermal : skn rbt LD50: 17800 mg/kg
Oral : rat LD50: 3500mg/kg
Carcinogen: -
Mutagen : -
Reproduct.: exper teratogen
Aquatic : 29ppm/96hr/bluegill/TLm/fresh water
Other Tox.: TARGET ORGANS: Eye, Upper Resp, Skin, CNS
[redacted] Routes of Exp.: Ingestion, Eye(Ocular), Skin Contact, Inhalation

PERSONAL PROTECTIVE MEASURES

pirators : APR: dusty/windy condit or known high concent or >1 but <5ppm; SCBA: >5ppm
Cridge Type : GMC-H, AP3 (RACAL)
ective Clothing: Coverall: Saranex Gloves: Viton-8hr
cial Precautions:

FIRST AID

alation: move to fresh air, CPR if nec, SEEK MEDICAL ATTENTION
/Skin : flush w/lg amt of water IMMEDIATELY for 15 min, wash skin with soap/water, SEEK MEDICAL ATTENTION
estion : SEEK MEDICAL ATTENTION IMMEDIATELY

SYMPTOMS

te : irritation of eyes, nose, throat, skin; weakness, dizziness, drowsiness, unconscious, CNS depressant. High concentr-
.- narcotic.
onic: skin rash, erythema, inflammation, dermatitis

DISPOSAL, FIRE, SPILLS (see attached sheet)

posal: D | Fire: 6,7 | Leaks & Spills: 3,4,5,6,9
mposition Products: CO, CO2

REFERENCES CONSULTED

[redacted]SHA Pocket Guide, Merck Index, ACGIH TLV Booklet, RTECS
er References: Sigma-Aldrich, OSHA, Poison Handbook

mical Classification: Aromatic Hydrocarbon

Last Revision Date:
05/10/89

Ecology and Environment, Inc.
Hazard Evaluation of Chemicals
Region V - Chicago

[redacted] : / /
[redacted] : _____
CAS No. :
DOT Class: 1294/FLAM LIQ 3

CHEMICAL NAME: Toluene
Synonym: Toluol, Methylbenzene
Formula: C6H5CH3
UN/NA #:

CHEMICAL PROPERTIES

Phys St: Liquid | Boil Pt: 231.10 °F | Ionz Pot : 8.82 ev | Fl Pt: 40.00°F
Mol Wt : 92.14 | Melt Pt: -139.00 °F | Vap Press: 22.00000 mmHg | LFL : 1.27%
Sp Gr : 0.87 | Frz Pt : -139.00 °F | Odr Thr : 1.20ppm | UFL : 7.00%
Stable : F | Hazardous Polymerization will occur : F
Odor : pungent, aromatic, benzene-like, sour
Incompat/React:nitric acid, strong oxidizers, peroxides
Solubility :water-slightly

TOXICOLOGICAL PROPERTIES

Exposure Limits: TLV-TWA (ACGIH): 100.00000ppm | PEL (OSHA): 100.00000ppm | IDLH: 2000.00000ppm
STEL: 150.00000ppm | STEL: —
Toxic Properties : CEILING: 300ppm, MAX PEAK: 500ppm/10M/8H shift, IRRITANT
Toxic Data: Inhalation: human Tclo: 200ppm
Dermal : skn rbt: LD50 12124 mg/kg
Oral : rat: LD50 5000mg/kg
Carcinogen: exper
Mutagen : exper
Reproduct.: exper teratogen
Aquatic : 1180mg/l/96hr/sunfish/TLm/fresh water
Other Tox.: TARGET ORGANS: CNS, Liver, Skin, Kidney
Routes of Exp.: Ingestion, Eye(Ocular), Skin Contact, Inhalation

PERSONAL PROTECTIVE MEASURES

Respirators : APR: dusty/windy condit or known high concent or >1 but <5ppm; SCBA: >5ppm
Cartridge Type : GMC-H
Protective Clothing: Coverall: Saranex Gloves: Viton
Special Precautions:

FIRST AID

Inhalation: move to fresh air, artf resp if nec, SEEK MEDICAL ATTENTION
Eye/Skin : flush w/water 15 minutes, SEEK MEDICAL ATTENTION
Ingestion : DO NOT INDUCE VOMITING, SEEK MEDICAL ATTENTION IMMEDIATELY

SYMPTOMS

Acute : eye/respiratory/skin irritation, fatigue, weakness, confusion, headachedizziness, drowsiness, tingling skin, numbness, vision disturbances, mild macrocytic anemia, narcotic in high concentrations,coma
Chronic: drying & cracking of skin, fatty degeneration of the heart, liver, and adrenals, and hemorrhages, anemia

DISPOSAL, FIRE, SPILLS (see attached sheet)

Disposal: D | Fire: 6,7 | Leaks & Spills: 3,4,5,6,9
Decomposition Products: CO2, CO

REFERENCES CONSULTED

NI[redacted]SHA Pocket Guide, Chris(vol. III), ACGIH TLV Booklet, RTECS
Other References: NIOSH Guides, Sigma-Aldrich

Chemical Classification: Aromatic Hydrocarbon

Last Revision Date: 06/10/89

Ecology and Environment, Inc.
Hazard Evaluation of Chemicals
Region V - Chicago

DATE : / /
C... : _____
CAS No. :
DOT Class: 2831

CHEMICAL NAME: Trichloroethane, 1,1,1-
Synonym: Methylchloroform
Formula: CH3CCl3
UN/NA #:

CHEMICAL PROPERTIES

Phys St: Liquid | Boil Pt: 165.00 °F | Ionz Pot : 10.20 ev | Fl Pt: 0.00°F
Mol Wt : 133.41 | Melt Pt: -31.00 °F | Vap Press: 100.00000 mmHg | LFL : 7.00%
Sp Gr : 1.31 | Frz Pt : -33.00 °F | Odr Thr : 350.00ppm | UFL : 16.00%
Stable : F | Hazardous Polymerization will occur : F
Odor : sweetish, chloroform-like, etherish
Incompat/React: strong oxidizers, Al, magnesium, zinc, strong bases; K, Na, acetone, nitrates, O, yield strong rxns
Solubility : insoluble-water; sol in acetone, benzene, carbon tet, methanol, ether

TOXICOLOGICAL PROPERTIES

Exposure Limits: TLV-TWA (ACGIH): 350.00000ppm | PEL (OSHA): 350.00000ppm | IDLH: 1000.00000ppm
STEL: 450.00000ppm | STEL: —
O Properties : Affect CNS, IRRITANT
Tox Data: Inhalation: human Tclo: 920ppm/70M
Dermal : -
Oral : rat: LD50: 10,300 mg/kg
Carcinogen: suspect
Mutagen : exper
Reproduct.: teratogen
Aquatic : 75-150ppm/1 pinfish/TLm/Salt water-no time period
Other Tox.: TARGET ORGANS: CNS, Eyes, Nose, Liver, Kidneys
Routes of Exp.: Ingestion, Eye(Ocular), Dermal Absorption, Skin Contact, Inhalation

PERSONAL PROTECTIVE MEASURES

Respirators : APR: dusty/windy condit or known high concent or >1 but <5ppm; SCBA: >5ppm
Cartridge Type : GMC-H or AP3 (RACAL)
Protective Clothing: Coverall: PE Tyvek Gloves: Viton
Special Precautions:

FIRST AID

Inhalation: move to fresh air, artf resp if nec, SEEK MEDICAL ATTENTION
Eye/Skin : remove contmd cloth, flush w/water 15min, wash skin with soap/water, SEEK MEDICAL ATTENTION
Ingestion : give water, induce vomiting if conscious, SEEK MEDICAL ATTENTION IMMEDIATELY

SYMPTOMS

Acute : irritation to eyes/skin/muc membranes, incoordination, nausea, confusion, drowsiness, poss loss of consciousness, dizzy, possible lung/brain damage form high concentrations
Chronic: dermatitis, liver/kidney damage-minimal

DISPOSAL, FIRE, SPILLS (see attached sheet)

Disposal: A | Fire: 3,7 | Leaks & Spills: 6,9,11
Decomposition Products: CO, CO2, HCl, Phosgene

REFERENCES CONSULTED

OSHA Pocket Guide, Merck Index, Chris(vol. III), ACGIH TLV Booklet, RTECS
Other References: Sigma-Aldrich, Poison Handbook

Chemical Classification: Halogenated Hydrocarbon

Last Revision Date: 05/10/89

Ecology and Environment, Inc.
Hazard Evaluation of Chemicals
Region V - Chicago

DATE : / /
[redacted] :
S No. :
Class: FLAMMABLE

CHEMICAL NAME: Xylene, all isomers

Synonym: Dimethylbenzene, Xylol
Formula: C6H4(CH3)2
UN/NA #:

CHEMICAL PROPERTIES

Phys St: Liquid | Boil Pt: 0.00 °F | Ionz Pot : 8.56 ev | Fl Pt: 81.00°F
Mol Wt : 106.20 | Melt Pt: 0.00 °F | Vap Press: 9.00000 mmHg | LFL : 1.00%
Sp Gr : 0.86 | Frz Pt : 0.00 °F | Odr Thr : 20.00ppm | UFL : 7.00%
Stable : F | Hazardous Polymerization will occur : F
Odor : aromatic odor, sweet
Incompat/React: strong oxidizers
Solubility : practically insoluble in water

TOXICOLOGICAL PROPERTIES

Exposure Limits: TLV-TWA (ACGIH): 100.00000ppm | PEL (OSHA): 100.00000ppm | IDLH: 1000.00000ppm
STEL: 150.00000ppm | STEL: —

Properties :
Data: Inhalation: hum TCLo: 200ppm
Dermal : —
Oral : rat LD50: 4300 mg/kg
Carcinogen: -
Mutagen : exper
Reproduct.: exper teratogen
Aquatic : —
Other Tox.: TARGET ORGANS: CNS, Eyes, GI Tract, Blood, Liver, Kidneys, Skin
Routes of Exp.: Ingestion, Eye(Ocular), Dermal Absorption, Skin Contact, Inhalation

PERSONAL PROTECTIVE MEASURES

Respirators : APR: dusty/windy condit or known high concent or >1 but <5ppm; SCBA: >5ppm
Cartridge Type : GMC-H or AP3 (RACAL)
Protective Clothing: Coverall: PE Tyvek Gloves: PVA, Viton (PVA degrades in water)
Special Precautions:

FIRST AID

Inhalation: move to fresh air, artf resp if nec, SEEK MEDICAL ATTENTION
Eye/Skin : flush w/water 15 minutes, wash skin with soap/water, SEEK MEDICAL ATTENTION
Ingestion : DO NOT INDUCE VOMITING, SEEK MEDICAL ATTENTION IMMEDIATELY

SYMPTOMS

Acute : vapor cause dizziness, headache, cough, pulmonary distress/edema, nausea/vomiting, abdominal cramps, narcotic in high concent, mild skin irritant
Chronic: possible liver and/or kidney damage, pulmonary congestion. Ingestion may be fatal.

DISPOSAL, FIRE, SPILLS (see attached sheet)

Disposal: U | Fire: 6,7 | Leaks & Spills: 3,4,5,6,9
Decomposition Products: CO, CO2

REFERENCES CONSULTED

NIOSH Pocket Guide, Merck Index, Chris(vol. III), ACGIH TLV Booklet, RTECS
Other References: NIOSH Guides, Sigma-Aldrich

Chemical Classification: Hydrocarbons, Aromatic

Last Revision Date: 06/10/89

Ecology and Environment, Inc.
Hazard Evaluation of Chemicals
Region V - Chicago

: / /

: _____

AS No. :

OT Class: 1671/POISON/CL6

CHEMICAL NAME: Phenol

Synonym: Phenic acid, Phenyl Hydroxide, Carbolic acid, Hydroxybenzene

Formula: C_6H_5OH

UN/NA #:

CHEMICAL PROPERTIES

ys St: Solid	Boil Pt: 359.20	°F	Ionz Pot : 8.50	ev		Fl Pt: 175.00°F
ol Wt : 94.11	Melt Pt: 106.00	°F	Vap Press: 0.36000		mmHg	LFL : 1.70%
p Gr : 1.06	Frz Pt : 105.60	°F	Odr Thr : --			UFL : 8.60%

Stable : F Hazardous Polymerization will occur : F

Odor : sweet, tarry, pungent, aromatic

Incompat/React: sulfuric acid, nitric acid, caustics, aliphatic amines/amides, strong acids, strong bases

Solubility : water soluble, miscible-alcohol, ether

TOXICOLOGICAL PROPERTIES

Exposure Limits: TLV-TWA (ACGIH): 5.00000ppm PEL (OSHA): 5.00000ppm IDLH: 250.00000ppm

STEL: — STEL: —

Tl roperties : HIGHLY TOXIC, BLISTERING AGENT

Tox Data: Inhalation: rat LC50: 316mg/mg3

Dermal : skn rbt LD50: 850mg/kg

Oral : rat LD50: 384 mg/kg

Carcinogen: suspect

Mutagen : exper

Reproduct.: exper teratogen

Aquatic : 1.5ppm/48hr/rainbow trout/TLm/fresh water

Other Tox.: TARGET ORGANS: Liver, Kidneys; Skin

Routes of Exp.: Ingestion, Eye(Ocular), Dermal Absorption, Skin Contact, Inhalation

PERSONAL PROTECTIVE MEASURES

Respirators : AFR: dusty/windy condit or known high concen. or >1 but <5ppm; SCBA: >5ppm

Cartridge Type : GMC-H or AP3 (RACAL)

Protective Clothing: Coverall: PE Tyvek Gloves: Viton-15hr, Neoprene-10hr, Butyl-8hr

Special Precautions: High concentrations in air are DANGEROUS to exposed skin/eyes/mucous membranes

FIRST AID

Inhalation: move to fresh air, artf resp if nec, SEEK MEDICAL ATTENTION

Eye/Skin : flush w/water at least 15min, wash skin with soap/water, SEEK MEDICAL ATTENTION IMMEDIATELY

Ingestion : DO NOT INDUCE VOMITING, give milk, egg white, water, SEEK MEDICAL ATTENTION IMMEDIATELY

SYMPTOMS

Acute : corrosive to ANY TISSUE, eye damage/blindness, no pain to skin but whitening of color, burns or systemic poisoning results, naus/vomtg, circulatory collapse, tachypnea, paralysis, convulsions, coma

Chronic: Phenol poisoning: vomtg, diffic. swallow, diarrhea, lost appetite, headache, fainting, dizzy, dark urine, mental disturbances, skin rash. Liver and Kidney damage.

DISPOSAL, FIRE, SPILLS (see attached sheet)

Disposal: A Fire: 3,7 Leaks & Spills: 4,6,9,11

Decomposition Products: CO, CO2

REFERENCES CONSULTED

SHA Pocket Guide, Chris(vol. III), ACGIH TLV Booklet

Other References: NIOSH Guides, Sigma-Aldrich

Chemical Classification: Phenol, Cresol, Hydroxy Cmpd, Aromatic

Last Revision Date: 10/30/89

Ecology and Environment, Inc.
Hazard Evaluation of Chemicals
Region V - Chicago

ATT : / /
[redacted] :
AS No. :
OT Class: 1114

CHEMICAL NAME: Benzene

Synonym: Benzol, Benzole, Benzolene, Coal Tar Naphtha
Formula: C6H6
UN/NA #:

CHEMICAL PROPERTIES

ys St: Liquid	Boil Pt: 176.00	°F	Ionz Pot : 9.25	ev		Fl Pt: 12.00°F
ol Wt : 78.11	Melt Pt: 41.00	°F	Vap Press: 75.00000		mmHg	LFL : 1.30%
p Gr : 0.88	Frz Pt : 42.00	°F	Odr Thr : 5.00ppm			UFL : 7.90%
table : F	Hazardous Polymerization will occur : F					

Odor : aromatic, pleasant, sweet
Incompat/React: nitric acid, oxidizing agents, chlorine, bromine
Solubility : Water-slightly, soluble in organic solvents

TOXICOLOGICAL PROPERTIES

Exposure Limits: TLV-TWA (ACGIH): 0.100 ppm PEL (OSHA): 1.00 ppm IDLH: 2000.00000ppm
STEL: 1.00 ppm STEL: 5.00 ppm

Oth Properties : CEILING: 25PPM/15MIN. ACCEPT MAX PEAK ABOVE CEIL
Tox Data: Inhalation: rat LC50: 1000ppm/7hr
Dermal : skn rbt 500mg/24H-MODERAT
Oral : rat LD50: 4894mg/kg
Carcinogen: human positive
Mutagen : exper
Reproduct.: exper
Aquatic : 5ppm/6hr/minnow/lethal/distilled water
Other Tox.: TARGET ORGANS: Blood, CNS, Skin, Bone Marrow, Eyes, Resp Sys
[redacted] Routes of Exp.: Ingestion, Eye(Ocular), Dermal Absorption, Skin Contact, Inhalation

PERSONAL PROTECTIVE MEASURES

Respirators : APR: dusty/windy condit or known high concent or >1 but <5ppm; SCBA: >5ppm
Cartridge Type : GMC-H or AP3 (RACAL)
Protective Clothing: Coverall: Saranex Gloves: Silvershield-8hr, PVA-6hr, Viton-6hr (PVA degrade in water)
Special Precautions: OSHA REGULATED CARCINOGEN.

FIRST AID

Inhalation: move to fresh air, give O2/CPR if nec, SEEK MEDICAL ATTENTION
Eye/Skin : remove contaminated clothes, flush areas w/water for 15 min, SEEK MEDICAL ATTENTION
Ingestion : Treat for shock, CPR if nec., SEEK MEDICAL ATTENTION

SYMPTOMS

Acute : dizziness,weakness,euphoria,headache,nau/vomt,tight chest,staggering, visual blurring,tremors,skin irritation/scaling/cracking
Chronic: loss of appetite, drowsy, nervous, pallor, anemia, petechiae, abnml bleeding, aplasia of bone marrow, leukemia, encephalopathy w/ataxia, tremulousness, emotional lability, diffuse cerebral atrophy

DISPOSAL, FIRE, SPILLS (see attached sheet)

Disposal: D Fire: 6,7 Leaks & Spills: 3,4,5,6,9
Decomposition Products: carbon monoxide, carbon dioxide

REFERENCES CONSULTED

[redacted]OSHA Pocket Guide, Chris(vol. III), ACGIH TLV Booklet, RTECS
Other References: Sigma-Aldrich, Handbook of Poisoning, OSHA

Last Revision Date:

Chemical Classification: Aromatic Hydrocarbon

4/20/92

Site Name

Job No. ZT2051

TDD/PAN T0593080231E

CHEMICAL HAZARD EVALUATION (Continued)

Compound	PEL/TWA	Route of Exposure	Acute Symptoms	Odor Threshold	Odor Description

THE SIGMA-ALDRICH LIBRARY OF CHEMICAL SAFETY DATA

Explanation of Codes

PROCEDURES FOR SPILLS OR LEAKS

1 Absorb on sand or vermiculite and place in closed container for disposal.
2 Cover with dry lime, sand, or soda ash. Place in covered containers using nonsparking tools and transport outdoors.
3 Shut off all sources of ignition.
4 Evacuate area.
5 Cover with an activated carbon adsorbent, take up and place in closed container. Transport outdoors.
6 Ventilate area and wash spill site after material pickup is complete.
7 Sweep up, place in a bag and hold for waste disposal.
8 Avoid raising dust.
9 Wear self-contained breathing apparatus, rubber boots and heavy rubber gloves.
10 Wear respirator, chemical safety goggles, rubber boots and heavy rubber gloves.
11 Cover with dry lime or soda ash, pick up, keep in a closed container and hold for waste disposal.
12 Carefully sweep up and remove.
13 Flush spill area with copious amounts of water.
14 Mix with solid sodium bicarbonate.
15 Place in appropriate container.
16 Wear protective equipment.
17 Wash spill site with soap solution.
18 Please contact the Technical Services Department. Be sure to mention the name and catalog number of the material.

FIRE-EXTINGUISHING MEDIA

1 Carbon dioxide.
2 Dry chemical powder.
3 Water spray.
4 Alcohol or polymer foam.
5 Class D fire-extinguishing material only.
6 Water may be effective for cooling, but may not effect extinguishment.
7 Carbon dioxide, dry chemical powder, alcohol or polymer foam.
8 Foam and water spray are effective but may cause frothing.
9 Do not use dry chemical powder extinguisher on this material.
10 Do not use carbon dioxide extinguisher on this material.
11 Noncombustible.
12 Do not use water.
13 Use extinguishing media appropriate to surrounding fire condition

Z14,866-0

Sigma-Aldrich Corporation, P.O. Box 355, Milwaukee, Wisconsin 53201 USA
(Sigma: 314-771-5765; Aldrich: 414-273-3850)

WASTE-DISPOSAL METHODS

The disposal methods outlined below are intended only as guides. We do not assume responsibility for their use. Careful consideration must be given to the chemical and physical properties of the substance. In addition, local laws and regulations may preclude the use of these methods which are primarily designed for small quantities. Observe all federal, state, and local laws.

The disposal of some chemicals may require deactivation or modification of the material by chemical means. Chemical waste-disposal reactions must be handled with the same care and consideration used with synthetic procedures. Appropriate consideration must be given to reaction conditions, *i.e.*, stoichiometry, order and rate of addition, heat of reaction, evolution of gaseous products, pH, efficiency of stirring, rate of reaction, atmospheric sensitivity, etc.

Chemical waste-disposal reactions should be carried out in a chemical fume hood and in appropriate laboratory glassware. Because these reactions are often vigorous, protective safety equipment such as safety goggles, respirator, gloves, face and/or safety shield and other protective equipment must be used.

Initial reactions in a disposal sequence should be carried out on a small scale (5-10g). The reactant concentrations should not exceed 10% of the reaction volume and the final reaction volume should not exceed 50% of the working capacity of the reaction vessel, regardless of the reaction scale. Larger quantities of the material should be handled in several small-size reactions. To ensure completion of reaction, the waste disposal procedure should be run for at least an additional 4 to 8 hours after all materials have been mixed.

All reactions should be run by technically qualified persons familiar with the potential hazards of the chemical reactions.

A Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

B The material should be ignited in the presence of sodium carbonate and slaked lime (calcium hydroxide). The substance should be mixed with vermiculite and then with the dry caustics, wrapped in paper and burned in a chemical incinerator equipped with an afterburner and scrubber.

C This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber.

D Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable.

E To a solution of the product in water, add an excess of dilute sulfuric acid. Let stand overnight. Remove any insolubles and bury in a landfill site approved for hazardous-waste disposal.

F Cautiously dissolve the material in water. Neutralize immediately with sodium carbonate or, if the material does not dissolve completely, add a little hydrochloric acid followed by sodium carbonate. Add calcium chloride in excess of the amount needed to precipitate the fluoride and/or carbonate. Separate the insolubles and bury in a landfill site approved for hazardous-waste disposal.

G Under an inert atmosphere, cautiously add the material to dry butanol in an appropriate solvent. The chemical reaction may be vigorous and/or exothermic. Provisions must be made for venting of large volumes of highly flammable hydrogen and/or hydrocarbon gases. Neutralize the solution with aqueous acid. Filter off any solid residues for disposal as hazardous waste. Burn the liquid portion in a chemical incinerator equipped with an afterburner and scrubber.

H Neutralize the solution and add filtering agent (10g per 100ml). Evaporate the liquid and bag the residual solid for burial in a landfill site approved for hazardous-waste disposal.

I Dissolve the solid in (or dilute the solution with) a large volume of water. Carefully add a dilute solution of acetic acid or acetone to the mixture in a well ventilated area. Provisions should be made to vent safely the hydrogen gas given off during the decomposition. Check acidity of the solution and adjust to pH 1 if necessary. Let stand overnight. Neutralize the solution (pH 7). Evaporate the solution and bury the residue in a landfill site approved for hazardous-waste disposal.

J Cautiously acidify a 3% solution or a suspension of the material to pH 2 with sulfuric acid. Gradually add a 50% excess of aqueous sodium bisulfite with stirring at room temperature. An increase in temperature indicates that a reaction is taking place. If no reaction is observed on the addition of 10% of the sodium bisulfite solution, initiate it by cautiously adding more acid. If manganese, chromium, or molybdenum is present, adjust the pH of the solution to 7 and treat with sulfide to precipitate for burial as hazardous waste. Destroy excess sulfide, neutralize and flush solution down the drain.

K Please contact the Technical Services Department. Be sure to mention name, catalog number and quantity of the material.

L The material should be dissolved in 1) water; 2) acid solution or 3) oxidized to a water-soluble state. Precipitate the material as the sulfide, adjusting the pH of the solution to 7 to complete precipitation. Filter the insolubles and dispose of them in a hazardous-waste site. Destroy any excess sulfide with sodium hypochlorite. Neutralize the solution before flushing down the drain.

M A slurry of the arenediazonium salt with water can be disposed of by adding it gradually to a stirred solution of 5-10% excess 2-naphthol in 3% aqueous sodium hydroxide at 0-20°C. After 12 hours, the resulting azo dye is filtered and either incinerated or buried in a landfill site approved for hazardous-waste disposal. Neutralize the remaining solution before disposal.

N For small quantities: cautiously add to a large stirred excess of water. Adust the pH to neutral, separate any insoluble solids or liquids and package them for hazardous-waste disposal. Flush the aqueous solution down the drain with plenty of water. The hydrolysis and neutralization reactions may generate heat and fumes which can be controlled by the rate of addition.

O Bury in a landfill site approved for the disposal of chemical and hazardous waste.

P Material in the elemental state should be recovered for reuse or recycling.

Q Cautiously make a 5% solution of the material in water or dilute acid. There may be a vigorous, exothermic reaction and fumes may be generated due to the hydrolysis of the material. Control any reaction by cooling and by the rate of addition of the material. Gradually add dilute ammonium hydroxide to pH 10. Filter off any precipitate for disposal in a chemical landfill. If there is no precipitation, gradually adjust the pH from 10 to 6, stopping when precipitation occurs.

R Catalysts and expensive metals should be recovered for reuse or recycling.

S Treat a dilute basic solution (pH 10-11) of the material with a 50% excess of commercial laundry bleach. Control the temperature by the addition rate of bleach and adjust pH if necessary. Let stand overnight. Cautiously adjust solution to pH 7. Vigorous evolution of gas may occur. Filter any solids for burial in a chemical landfill. Precipitate any heavy metals by addition of sulfide and isolate for burial. Additional equivalents of hypochlorite may be needed if the metal can be oxidized to a higher valence state. For metal carbonyls, the reaction should be carried out under nitrogen.

T Cautiously make a 5% solution of the product in water; vent because of possible vigorous evolution of flammable hydrogen gas. Acidify the solution to pH 1 by adding 1*M* sulfuric acid dropwise. Acidification will cause vigorous evolution of hydrogen gas. Allow the solution to stand overnight. Evaporate the solution to dryness and bury the residue in a landfill site approved for hazardous-waste disposal.

U Take the material (or a solution) and make a 5% solution in tetrahydrofuran. Cautiously add the solution dropwise to an ice-cooled, stirred basic solution of commercial bleach. Oxidation may release flammable hydrocarbon gases which must be vented. Let stand overnight. Adjust the pH to 7 and destroy excess hypochlorite with sodium bisulfite before disposal of the solution.

V Under an inert atmosphere cautiously add dry butanol or a mixture of dry butanol in an appropriate solvent, to a solution of the material in tetrahydrofuran. The chemical reaction may be vigorous and/or exothermic. Provisions must be made for the venting of a large volume of flammable hydrogen gas. When gas evolution ceases, cautiously add a basic hypochlorite solution dropwise to the reaction solution. Let stand overnight. Neutralize the solution and treat with sodium bisulfite to destroy any excess hypochlorite. Filter any solids for burial in a landfill site approved for hazardous-waste disposal.

E. EMERGENCY INFORMATION

(Use supplemental sheets, if necessary)

LOCAL RESOURCES

(Obtain a local telephone book from your hotel, if possible)

Ambulance 911

Hospital Emergency Room Community General Hospital/Medical Ctr. 100 Lefevre (815) 625-0400

Poison Control Center Rush Presbyterian-St. Luke's Medical Center 800-942-5969/(312) 942-5969

Police (include local, county sheriff, state) 911

Fire Department 911

Airport N/A

Agency Contact (EPA, State, Local USCG, etc.) Paul Steadman

Local Laboratory N/A

UPS/Fed. Express

Client/EPA Contact Paul Steadman

Site Contact

SITE RESOURCES

Site Emergency Evacuation Alarm Method Verbal

Water Supply Source TAT will supply

Telephone Location, Number N/A

Cellular Phone, if available

Radio N/A

Other N/A

EMERGENCY CONTACTS

1. Dr. Raymond Harbison (Univ. of Florida) ..... (501) 221-0465 or (904) 462-3277, 3281
   Alachua, Florida (501) 370-8263 (24 hours)

2. Ecology and Environment, Inc., Safety Director
   Paul Jonmaire ..... (716) 684-8060 (office)
   (716) 655-1260 (home)

3. Dean Tiebout, Regional Safety Coordinator, Chicago ..... (312) 663-9415 (office)
   (312) 338-4423 (home)

4. Jerry Oskvarek, Office Manager, Chicago ..... (312) 775-7040 (home)

5. Tom Kouris, TAT Leader, Chicago ..... (312) 201-3790 (office)
   (219) 924-1341 (home)

6. Pat Zwilling, ATATL, Chicago ..... (708) 587-5934 (home)

7. Ron Bugg, TAT Safety Officer, Chicago..... (219) 922-8836 (home)

SITE DOSIMETER LOG

PROJECT/PAN # E057028TCA SITE NAME Hoffman Landfill/Asphalt Assoc.

SITE SAFETY OFFICER John Sherrard WEEK OF August 23, 1993

NAME AND DOSIM. #	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
Raghu Nagam 008			5				
John Sherrard 037			5				
Yvette Anderson 7472W0043			5				

To the nearest half-hour, record time spent downrange as "S" (e.g., S:2.5hrs), time spent in active POS operation as "P", and any time spent downrange in rescue activity as "R".

HS005(2/24/89)

MEDTOX HOTLINE

1. Twenty-four hour answering service: (501) 370-8263

   What to report:

   - State: "this is an emergency."
   - Your name, region, and site.
   - Telephone number to reach you.
   - Your location.
   - Name of person injured or exposed.
   - Nature of emergency.
   - Action taken.

2. A toxicologist, (Drs. Raymond Harbison or associate) will contact you. Repeat the information given to the answering service.

3. If a toxicologist does not return your call within 15 minutes, call the following persons in order until contact is made:

   a. **24 hour hotline - (716) 684-8940**
   b. Corporate Safety Director - Paul Jonmaire - home # (716) 655-1260
   c. Assistant Corp. Safety Officer - Steven Sherman - home # (716) 688-0084
   d. Chicago Health & Safety Manager - Dean Tiebout - home # (312) 338-4423

EMERGENCY ROUTES

(NOTE: Field Team must Know Route(s) Prior to Start of Work)

Directions to hospital (include map) ANIXER Rd. to Route 30 EAST. ~~North 7 8mi to Sterling. Exit Lefevre Rd to Hospital.~~ Into Sterling, IL. About 2 mi. Turn onto Lefevre Rd to Hospital.

Emergency Egress Routes to Get Off-Site ~~To be determined~~ go South on Anixter Road until you leave the Asphalt Co. Meet at warehouse parking lot on East Side of Anixter Rd. right after leaving the facilities property.

HSO18A(04/02/91)

Community General Hospital
(C G H)/Medical Center
100 E. Lefevre Rd.
Sterling, IL 60181
(815) 625-0400

HOSPITAL ROUTE MAP.
HOFFMAN LF / ASPHALT AREA.

PARK LOT
T05-9308-023

COMMUNITY GENERAL HOSPITAL
CGH MEDICAL CENTER.
100 E. LEFEURE RD.
STERLING, IL 61081
(815) 625-0400
APPROXIMATE DIST: 7 MILES.

Vehicle Toll Schedule

NORTHWEST TOLL PLAZAS

Plaza Name	Zone No.	Toll Collected From	Passenger Car Toll	Vehicle Toll Per Axle
South Beloit	1	All Traffic	.30	.15
* South Rockford	3	Westbound On	.10	.05
		Eastbound Off	.10	.05
Belvidere	6	All Traffic	.30	.15
Marengo-Hampshire	7	All Traffic	.30	.15
Elgin	9	All Traffic	.30	.15
* Route 31	11	Eastbound On	.20	.10
		Westbound Off	.20	.10
* Route 25	13	Eastbound On	.20	.10
		Westbound Off	.20	.10
Route 53	15	Westbound On	.10	.05
		Eastbound Off	.10	.05
Devon Avenue	17	Westbound Only	.30	.15
River Road	19	Eastbound Only	.30	.15

TRI-STATE TO

Waukegan	2
* Half-Day Road (Illinois 22)	2
Deerfield Road	2
Willow Road	2
Touhy Avenue	2
O'Hare-West	3
O'Hare-East	3
Irving Park Road (Illinois 19)	3
Cermak Road	3
Interstate 55	3
83rd Street	3
163rd Street	4
Westbound I-80	4
Eastbound I-80	4
* Halsted Street (Illinois 1)	4

Warehouse Phone (312) 775-7763 F. EQUIPMENT CHECKLIST Job/PAN E05Z028TCA

Team Leader Raghu Nagam

PROTECTIVE GEAR

Level A	No.
SCBA	
SPARE AIR TANKS	
ENCAPSULATING SUIT (Type _____)	
SURGICAL GLOVES (Latex)	
NEOPRENE SAFETY BOOTS	
BOOTIES (Latex)	
GLOVES: Type _____ SM _____ M _____ L _____	
OUTER WORK GLOVES	
CASCADE SYSTEM	
5-MINUTE ESCAPE MASK	
COOLING VEST	
HARD HAT	
Level C	
ULTRA-TWIN RESPIRATOR	✓
POWER AIR PURIFYING RESPIRATOR	
CARTRIDGES (Type GMC-H)	✓3 Box
PROTECTIVE COVERALL: Type TYVEK SM _____ M _____ L _____	6 PAIRS
BUTYL APRON	
SURGICAL GLOVES (LATEX)	✓
GLOVES: Type NITRILE/VITON Viton SM _____ M _____ L _____	FROM 'B'
OUTER WORK GLOVES	
GLOVE LINERS _____	
FACE SHIELD	
HARDHAT	✓
RAIN SUIT	
NEOPRENE SAFETY BOOTS	
BOOTIES (LATEX)	FROM 'B'
STEEL TOED BOOTS	✓

Level B	No.
SCBA	3
SPARE AIR TANKS	9
PROTECTIVE COVERALL: Type Tyvek, Saranex SM _____ M ✓ L ✓	1 Box
BUTYL APRON	
SURGICAL GLOVES (LATEX)	1 Box
GLOVES: Type NITRILE SM _____ M X L _____	12
NEOPRENE SAFETY BOOTS	✓
BOOTIES (LATEX)	~~0~~ 12
HARD HAT	✓
FACE SHIELD	
MANIFOLD SYSTEM WITH AIRLINE	
CASCADE SYSTEM	
RAIN SUIT	
OUTER WORK GLOVES	
Level D	
ULTRA-TWIN RESPIRATOR (Available)	✓
CARTRIDGES (Type GMC-H)	LEVEL 'C'
5-MINUTE ESCAPE MASK (Available)	
PROTECTIVE COVERALL: Type TYVEK SM _____ M _____ L _____	LEVEL 'C'
OUTER WORK GLOVES	
HARD HAT	✓
FACE SHIELD	
RAIN SUIT	
WINTER BOOTS	
BOOTIES (LATEX)	✓
NEOPRENE SAFETY BOOTS	
STEEL TOED BOOTS	✓
SAFETY GLASSES	✓

RS018D(05/30/89)

INSTRUMENTATION	No.
OVA	
THERMAL DESORBER	
O2/EXPLOSIMETER W/CAL. KIT	✓
PHOTOVAC TIP	
HNu (Probe 10.2 OR 11.7)	✓
MAGNETOMETER	
PIPE LOCATOR	
WEATHER STATION	
DRAEGER PUMP, TUBES _____	
BRUNTON COMPASS	
MONITOX CYANIDE	1
HEAT STRESS MONITOR	
NOISE EQUIPMENT _____	
PERSONAL SAMPLING PUMPS (Type_____)	
DUST MONITOR (MDA OR GCA System)	
RADIATION EQUIPMENT	
TLD BADGES	✓
DOCUMENTATION FORMS	✓
PORTABLE RATEMETER	✓
SCALER/RATEMETER	
NaI Probe	
ZnS Probe	
GM Pancake Probe	✓
GM Side Window Probe	
MICRO R METER / RAD-MINI	
ION CHAMBER	
ALERT DOSIMETER	
POCKET DOSIMETER	
FIRST AID EQUIPMENT	
FIRST AID KIT	✓
OXYGEN ADMINISTRATOR	
STRETCHER	
PORTABLE EYE WASH	
BLOOD PRESSURE MONITOR	
FIRE EXTINGUISHER	

DECON EQUIPMENT	No.
WASH TUBS	1-2
BUCKETS	✓
SCRUB BRUSHES	✓
PRESSURIZED SPRAYER	
DETERGENT (Type alconox)	✓
SOLVENT (Type WATER -)	✓
PLASTIC SHEETING	1 ✓
TARPS AND POLES	
TRASH BAGS	✓
TRASH CANS	
MASKING TAPE	✓
DUCT TAPE	✓
PAPER TOWELS	✓
FACE MASK SANITIZER	✓
FOLDING CHAIRS	
STEP LADDERS 20'	1
DISTILLED WATER	3 -
SAMPLING EQUIPMENT	
80 OZ. AMBER GLASS BOTTLES	4
1 L. AMBER GLASS BOTTLES	4
40 ML. VIALS	12
1 L. PLASTIC 4 x 2	8
8 OZ. GLASS	1 BOX
~~120 ML. GLASS~~ 4 OZ	1 BOX
SPOONS	
~~KNIVES~~ 32 QT BOTTLES.	2 BOX
FILTER PAPER	
PERSONAL SAMPLING PUMP SUPPLIES	
BUCK CALIBRATOR	
HAND BAILERS	
THIEVING RODS WITH BULBS	
DIOXIN SAMPLE KIT	
PRESERVATIVES: HNO3 ✓ NaOH ✓ Other HCL	
STRING	

VAN EQUIPMENT	No.
TOOL KIT	
HYDRAULIC JACK	
LUG WRENCH	
TOW CHAIN	
VAN CHECK OUT	
Gas	
Oil	
Antifreeze	
Battery	
Windshield Wash	
Tire Pressure	
MISCELLANEOUS	
CHALK	
LEVEL/TRIPOD AND ROD	
BOWLS	
PITCHER PUMP	
SURVEYOR'S TAPE	
100 FIBERGLASS TAPE	
300 NYLON ROPE	
NYLON STRING	
SURVEYING FLAGS	
FILM	✓
WHEEL BARROW	
BUNG WRENCH	
SOIL AUGER	
PICK	
SHOVEL	
CATALITIC HEATER	
PROPANE GAS	
BANNER TAPE	
SURVEYING METER STICK	
CHAINING PINS & RING	
TABLES	
WEATHER RADIO	
BINOCULARS	
MEGAPHONE	

MISCELLANEOUS (Cont.)	No.
HEARING PROTECTION	
LIFE VESTS	
WALKIE-TALKIE	
CONDUCTIVITY METER	
PH METER	
CAMERA	
WATER-LEVEL INDICATOR	
SPLIT SPOON SAMPLERS	
PVC HAND PUMP	
RESISTIVITY METER	
WELL POINT SAMPLER	
ROBAIR PUMP SYSTEM	
THERMOMETER	
MASTERFLEX PUMP & FILTER APPARATUS	
SHIPPING EQUIPMENT	
COOLERS	✓
PAINT CANS WITH LIDS, 7 CLIPS EACH	✓
VERMICULITE	✓
DUST MASK	
SHIPPING LABELS	✓
DOT LABELS: "DANGER"	✓
"UP"	✓
"INSIDE CONTAINER COMPLIES ..."	✓
"HAZARD GROUP"	✓
STRAPPING TAPE	✓
BOTTLE LABELS	
BAGGIES	
CUSTODY SEALS	✓
CHAIN-OF-CUSTODY FORMS	✓
FEDERAL EXPRESS FORMS	✓
CLEAR PACKING TAPE	✓

SITE SAFETY MEETING
(Must be filled out by Site Safety Officer at the site)

Project Hoffman Landfl. TDD: T05-9308-023 PAN #:

Site Safety Officer : John Sherrard Date 8-25-93 Time 0835

Address:

Type of Work: Drum/Tank Sampling, Soil Sampling

SAFETY TOPICS PRESENTED

Protective Clothing/Equipment: Saranex, bootres, nitriles, hard hat, Steel Toed Boots APR, SCBA, HNu, O_2/explosimeter

Chemical Hazards: exposure to organic chemicals

Physical Hazards: heat stress, trip/fall, cut, splash

Radiation Hazards: —

Emergency Procedures: GET OFF-SITE TO ANXTER ROAD

Hospital/Clinic: COMMUNITY GENERAL HOSPITAL Telephone: (813) 625-0600

Hospital Address: 100 E LEFEURE RD Emergency Telephone #: 11

Special Equipment:

Others:

Checklist

1. Emergency information reviewed? (Y) / N and made familiar to all team members? (Y) / N
2. Route to nearest hospital explained and reviewed? (Y) / N and its location known to all team members? (Y) / N
3. Site safety plan readily available and its location known to all team members? (Y) / N

The site safety meeting shall be attended by all personnel who will be working within the site area. Daily informational update meetings will be held when site tasks and conditions change.

ATTENDANCE

PRINT NAME	SIGNATURE	DATE
John Sherrard	John Sherrard	8-25-93
RAGHU NAGAM	Raghu Nagam	8/25/93
Yvette Anderson	Yvette Anderson	8-25-93

MEETING CONDUCTED BY:
JOHN SHERRARD.

Revised (4/3/92)

ECOLOGY AND ENVIRONMENT, INC. - CHICAGO

Site Name: Hoffman Landfill PAN/TDD#: / TDS-9308-023
Date: 8-25-93 Wind Direction: _____ Weather HOT, HAZY, cloudy 90's

EQUIPMENT	ID#	CALIB./OPER. CHECK	INITIALS & DATE	BACKGROUND READING	ON-SITE READING
OVA					
HNu	#32	X	JS 8/25/93	0	
Photovac Tube					
O2 Meter					
Explosimeter		X	JS 8/25/93	0% LEL 22% O_2	
Combo-meter					
Rad-MINI					
Monitor-4					
Draeger tubes					
Monitox					
OTHERS:					

Attendees at Site: Raghu Nayyar, John Sherrard, Yvette Anderson

Protective Clothing Worn: Saranex, nitriles, hard hat, S.T. boots, bootees

Comments on Monitoring or Protective Clothing (ex: Was the monitoring equipment possibly effected by the weather?)

Team Leader Raghu Nayyar (Print Name) R. Nayyar (Signature) 8/26/93 (Date)

Site Safety Officer JOHN SHERRARD (Print Name) John Sherrard (Signature) 8/25/93 (Date)

Please submit the original to Ron Bugg and a copy to the project file

(Revised 4/3/92)

Vehicle Safety Checklist
Ecology & Environment, Inc.
Chicago Office

Date: _____ Time: _____ Odometer: _____

Vehicle Model: _____ Color: _____ License Plate No. _____

INTERIOR:
____ All Safety Belts-Proper Locking
____ Parking Brake

START ENGINE:
____ Oil Pressure
____ Instrument Panel (Warning Lights or Buzzers)
____ Horn
____ Windshield Wiper & Washer
____ Heater/Defroster
____ Mirrors
____ Steering (Loose)
____ Interior Lights
____ Emergency Flashers
____ Starts Properly

FRONT:
____ Headlights (Dim/Bright)
____ Turn Signals
____ Emergency Flashers

REAR:
____ Tail Lights
____ Brake Lights
____ Back up Lights
____ Turn Signals
____ Emergency Flashers

MECHANICAL OPERATION:
____ Engine (misses, knocks, etc.)
____ Check Oil
____ Water/Anti-freeze
____ Wiper Fluid
____ Brake Fluid

OUTSIDE:
____ Tires (properly inflated)
____ Gas Tank Cap

EMERGENCY EQUIPMENT:
____ Fire Extinguisher
____ First Aid Kit
____ Flags, Flares,
____ Spare tire (properly inflated)
____ Tire Changing Kit (jack, tools, etc.)

REMARKS:
_____
_____
_____
_____
_____
_____
_____
_____

TEAM MEMBER/OPERATOR: Rachel Hoffman / R. Hoffman
(print name) signature

SITE NAME/ADDRESS: Hoffman Landfill / Asphalt Assoc. Rock Falls
PAN/JOB NUMBER: ~~E05Z028TCA~~ / ZT2051

RETURN OF VEHICLE TO DUTY STATION

Vehicle Cleanliness: _____
Remarks: _____
_____
_____
_____

Corrections Necessary: _____
_____

TEAM MEMBER/OPERATOR: _____ / _____
(print name) signature

Date: _____ Time: _____ Odometer: _____